

Climate-103: Surging Seas Activity Sheet

What water levels should I be thinking about for my location?

1. Visit *Surging Seas* Risk Finder at www.riskfinder.org
2. Search for your county.
3. Click “Local Report” button to download a local report for this location; then click “Get download.” (Skip the form, if you wish, by clicking “download now” button below the form.)
4. Read the first paragraph under “Sea level rise and flood forecast.” The last sentence suggests a coastal flood level that would likely pose concerns for your area. Fill in these blanks:

Surging Seas analysis suggests coastal floods above ____ feet likely pose significant concerns for areas in _____ County.

5. Return to the web tool. (If you are lost, visit www.riskfinder.org and search for your location again.)
6. Set the sea level slider to the water level you wrote down above. (If it’s not already set by default.)
7. View the summary information at the top of the page.

Fill in the blanks below:

About _____ people in _____ County live on exposed land below _____ feet.

There is a _____% risk of at least one flood over _____ feet taking place between today and 2050 in the _____ County area, based on the sea level rise mode selected in *Surging Seas*. (more on choosing this below)

Download *Surging Seas* MAPS

8. In the top right of the Risk Finder page you’re on, click on the “Full-Feature Map” button. You should see a 2nd web page/tab open. Keep both tabs open.
9. On the *Surging Seas* Risk Zone Map, you should see your area.
10. Move the water level on the left side up and down. Map areas below the selected water level are displayed as satellite imagery shaded in blue indicating vulnerability to flooding from combined sea level rise, storm surge, and tides, or to permanent submergence by long-term sea level rise.
11. Set it to the water level you wrote down above.
12. Set the zoom level using the + and - buttons on the bottom right of the screen.
13. The map is currently displaying the “Social Vulnerability” layer. Click “Social Vulnerability” to turn it off. Select “Population.”
14. To the left of the search box on the top right, click the </> icon to see how you could embed this map in your own website.
15. You can pan around the map by click and dragging. After you have zoomed, panned, and set the water level, click the “Download map image” button and download a PowerPoint Slide. (Web form optional)

Explore “WHEN Are the Risks?”

16. Return to the Risk Finder web tool. (If you’re lost, visit www.riskfinder.org and search for your location again.)
17. Scroll to the 2nd section of the page entitled “When Are the Risks?”
In this section you can view the probability of coastal floods exacerbated by sea level rise over time.
18. By default, you view the “Multi-year risk of flooding above X feet.” Move the water slider up and down to see how the likelihood of one coastal flood of this water level changes over time.
19. Click the “Slow rise” sea level rise scenario button on the right of the screen to see how a slow rise of sea level changes the flood risk.
20. Click “Advanced” (located beneath the sea level rise scenario buttons) to see different sea level rise scenarios you can choose. Click on “National Climate Assessment” and select “Highest” and then click “X” to close the window. Note that the overall flood risk has increased some.
21. Click on “Multi-year risk of flooding” and select “Projected Sea Level Rise.” The graph now shows you sea level rise projections by decade.
22. Click the sea level rise scenario buttons to the right of the graph to view different projections.
Note: you can download PowerPoint slides, images, and spreadsheets of these graphs if you click on the icons above the graph.
23. Set the water level to the level you wrote down above or to different/additional water levels.
24. Scroll to the top of the page and click “Local fact sheet” button to download a 2 page PDF fact sheet. (web form optional) It may take several minutes to generate on-the-fly.
25. Once you download it, open the PDF and notice that in the top right of the PDF it has a “When could a X-foot flood happen?” section.
This section provides the likelihood ranges based on the sea level rise model you chose. This section also provides you with a sea level rise projection range.

Fill in the blanks:

There is a ___% to ___% likelihood by 2030 of a ___ foot flood near _____ County

Seas could rise _____ ft. to _____ ft. by 2100 near _____ County under the _____ sea level rise scenario.

WHAT is at risk in my County?

26. On riskfinder.org search for your county and scroll down to the “What is at Risk?” section.
In this section of Risk Finder, Climate Central analyzes The WHO & WHAT — over 100 demographic, economic, infrastructure, and environmental variables for thousands of communities. The data are drawn mainly from federal sources, including NOAA, USGS, FEMA, DOT, DOE, DOI, EPA, FCC and the U.S. Census. Surging Seas intersects public datasets such as population, homes, and hospitals with NOAA’s elevation data to produce this analysis.
27. Set the water level to the level you wrote down above, or other water levels you wish to explore. Notice that as you move the water slider, the analysis on the right changes dynamically.



28. Click the buttons above the table such as “Buildings” or “Contamination Risks” to explore different categories. Fill in the blanks:

At a water level of _____ feet above the local high tide line:

- _____ people
- _____ homes
- _____ in property value
- _____ road miles
- _____ hazardous waste sites
- _____ wastewater sites
- _____ square miles of land

are at risk in _____ County.

[Water level could be derived from a coastal flood (made worse by sea level rise) in the near term, and tides, permanent inundation from sea level rise in the longer-term, or a combination of these.]

- 29. Click on the XLS icon above the table to see your options for downloading more detailed spreadsheets of this analysis.
- 30. Scroll down to the map below the chart to see your county broken down by ZIP code. Use the “Top threats on map” list to fill in the blanks below.

First, in the chart above, select “Population.” The top three ZIP codes with the most number of people at risk in _____ County with a 3-foot rise in sea level.

- _____
- _____
- _____

The top three ZIP codes with the most number of people at risk in _____ County with a 6-foot rise in sea level.

- _____
- _____
- _____

- 31. Click on the PPT icon to download a slide of your county broken down by zip code at 3 feet (or whichever water level you choose).